

REMARKS

Claims 1, 10, 16 and 18-41 have been rejected. Applicants have amended claims 1, 23, 28 and 31; claims 10, 16 and 27 have been cancelled; and claims 1, 18-26 and 28-41 remain in the application. Reexamination and reconsideration of the application are requested.

Claims 23 and 31 have been objected because of informalities. Applicants have amended claims 23 and 31 and respectfully request that this objection be withdrawn. No new matter has been added by the amendments.

Claims 10 and 27 stand rejected under 35 U.S.C. § 112, second paragraph. Applicants have cancelled claim 10 and 27.

Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Vourvopoulos ('838) in view of Armistead ('759). As previously mentioned, Applicant has cancelled claim 10.

Claims 1, 16, 18-22, 28-30 and 35-41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over von Alfthan et al. ('885) in view of Armistead ('759), Brackenbush et al ('990) and Vourvopoulos ('838). The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: (1) there must be some suggestion or motivation to modify or combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the combined references must teach or suggest all of the claim limitations. Claim 1 and 28 are allowable over the proposed combinations of reference for at least the reason that the references, individually or as combined, fail to disclose or suggest each and every limitation of the claim.

Applicants have amended independent claims 1 and 28 to include the limitation of claim 16 (now cancelled). As amended independent claim 1 and 28 recite a method for identifying a chemical substance from a single, calibrated energy spectrum. None of cited references discloses the calibration of a single energy spectrum using the measured energies within the single spectrum from neutron induced gamma rays generated from the detector, shielding materials or container materials. For example, von Alfthan et al. requires background energy measurements in addition to the energy measurements of the specimen (See: Column 4, lines 65-68). Also, Vourvopoulos requires at least three distinct and separate spectra for fast neutron and thermal neutron induced reactions, and finally a background measurement. (See column 7, lines 20-26; column 7, lines 43-45; column 7, lines 54-56; and column 6, lines 35-40).

In the Office Action, the Examiner notes on page 8 that "Vourvopoulos teaches (column 6, lines 65-67) to determine a response spectrum by measuring a sample containing chemical elements of interest". However, it should be noted that this response spectrum in Vourvopoulos is independent, and is in addition to, the actual multiple measurements of the unknown. The present invention does not require an independent, or multiple, response spectrum for calibration of the single measured energy spectrum.

In view of the above amendment and remarks, Applicants believe this application should be considered ready for allowance and Applicants earnestly solicit an early notice of the same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, please call the undersigned at the below-listed number.

RESPECTFULLY SUBMITTED,

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